



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

ATLANTA FEDERAL CENTER  
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ATLANTA, GEORGIA 30303-8960

OCT 07 2005

4APT-APB

John Lyons, Director  
Division of Air Quality  
Department of Environmental Protection  
Kentucky Natural Resources  
& Environmental Protection Cabinet  
803 Schenkel Lane  
Frankfort, KY 40601

Dear Mr. Lyons:

This correspondence is being sent to provide you with an official final copy of the Environmental Protection Agency (EPA) Region 4 report, which was completed as a result of the EPA Title V and New Source Review (NSR) program evaluation conducted on March 10, 14, and 16, 2005 (see Enclosure). The purpose of this program review was to evaluate the status and the ability of the Kentucky Department of Environmental Protection (KDEP) to carry out the duties and responsibilities required to effectively run the Title V and NSR programs, as well as find out how EPA can best assist the KDEP in meeting these commitments.

I would like to thank you and your staff for your cooperation throughout the evaluation. Your staff responded to the questionnaires and provided all requested material in a timely manner. As a result of this evaluation, a number of areas of concern were noted. While this report details EPA findings, EPA will provide to you in a separate correspondence the specific areas of concern that must be addressed. We look forward to working with you in ensuring that these areas of concern are adequately addressed.

If you or your staff have any questions regarding the report, please do not hesitate to contact Randy Terry of the EPA Region 4 staff at (404) 562-9032.

Sincerely,

Jesse Baskerville  
Acting Director  
Air, Pesticides and Toxics  
Management Division

Enclosure



## **Kentucky Department for Environmental Protection Title V and New Source Review Program Review**

The U.S. Environmental Protection Agency (EPA) Region 4 committed to conduct detailed title V and New Source Review (NSR) program reviews for all state and local programs that have at least ten title V major sources within their jurisdiction. These evaluations also include a review of the title V fees collected and billed annually. This commitment results from an agreement between the EPA Office of Air and Radiation and the EPA Office of Inspector General, which required EPA to conduct title V program evaluations of all state and local programs. EPA Region 4 decided, in addition to title V, to use this opportunity, when applicable, to evaluate the NSR programs at each of the state and local programs. The program reviews are to be completed by the end of Fiscal Year 2006. The Kentucky Department for Environmental Protection (KDEP), Division for Air Quality (DAQ) program review was conducted the dates of March 10, 14, and 16, 2005 in Frankfort, Kentucky. Prior to arrival at the Frankfort office, EPA emailed a list of 10 title V sources to DAQ that EPA planned to review as part of the overall program review. Upon EPA's arrival at DAQ, EPA spent the first day reviewing the title V files and discussing the title V questionnaire with DAQ staff. The following day was allocated to completing the review of the permit files. The following parties attended the title V questionnaire discussion: Randy Terry (EPA Region 4), Art Hofmeister (EPA Region 4), and Don Newell (DAQ). James Morse (DAQ) and Sreenivas Kesaraju (DAQ) attended a portion of the questionnaire discussion in the afternoon.



# **Kentucky Title V Program Review**

## **1. Program Review**

DAQ's organizational structure for air permitting resides at the main office in Frankfort, Kentucky. All title V permits for the Commonwealth of Kentucky are processed in the Frankfort Central office. DAQ's title V permitting jurisdiction covers all of Kentucky with the exception of Jefferson County, Kentucky. The Louisville Metro Air Pollution Control District (LMAPCD) operates the permitting agency covers Jefferson County. A separate program evaluation report was written covering the LMAPCD title V program.

DAQ has a merged program for NSR and title V permits. This allows DAQ to generally grant new source construction permits a higher priority.

The headings in the title V portion of this report duplicate the headings in the title V program review questionnaire administered during the visit.

EPA appreciates Kentucky's efforts to aid the evaluation process by providing an answered copy of the program review questionnaire prior to the meeting. For many questionnaire items, the answers provided by DAQ are more detailed than indicated in the summary discussion below. The answered questionnaire from DAQ will be on file at EPA Region 4 for reference.

### **A. Title V Permit Preparation and Content**

During the early stages of permit issuance, DAQ noted that none of the applications submitted by the sources contained enough information for the permit to be created without requesting additional information. DAQ believes that the need to continually request better process descriptions from the sources was an issue that delayed processing the initial applications. Additional issues that led to delayed permit issuance were failures by the permittee to include an adequate modeling demonstration and to address toxic issues within the application. To improve the quality of applications received from the sources, the DAQ gave consistent reminders to the sources that the speed of the permit issuance was directly connected to the quality of the application. Ultimately, DAQ believes that the main reason that application processing and permit issuance are delayed is the ongoing problem with personnel turnover and the fact that adequate resources were never allocated at the inception of the title V program. While complete applications will improve the situation, until DAQ resolves the personnel turnover rate, the problem with the permit issuance rate will not be eliminated. As of the date of the review, DAQ had 43 of their initial title V applications remaining to be permitted. DAQ has indicated that all the remaining applications will be permitted by December 31, 2005, and provided a schedule to EPA.

In instances where a significant amount of time has passed between application submittal and drafting a permit, DAQ does not require that the application be updated; however, they do require the source to submit their compliance certification on an annual basis. Most of the

sources that have not received their title V permit certify compliance with their title V application. If they don't certify compliance with their title V application, then DAQ contacts them and inquires about any changes prior to drafting the permit. Kentucky also does a check prior the issuance of each permit to verify whether a source is in compliance. If a source cannot demonstrate compliance, then the source must either not operate until they can show compliance or the permit is reopened to include a compliance schedule.

To reduce their permit processing time, DAQ has negotiated a contract with outside sources to draft title V renewal and construction permits. DAQ is planning to have their staff continue to process the remaining initial title V applications. DAQ requires all title V permits to undergo a three tiered review system for all permits prior to public noticing the permit. All permits must undergo a review by a professional engineer (P.E.), supervisor, and the director's office.

DAQ has made specific efforts to streamline their permit issuance by grouping similar units and listing the requirements of only the most stringent applicable requirement. This effort reduces multiple, similar requirements on the same emission unit.

DAQ prepares a statement of basis (SOB) and/or factual and legal basis for each title V permit processed incorporating the requirements of 40 CFR part 70.7(a)(5). The SOB contains all the justifications for the permit conditions. In order to ensure consistency in developing the SOB, DAQ has provided training to all permits writers detailing the necessary content of the SOB. DAQ works to ensure that each SOB explains, at a minimum, the rationale for monitoring as well as applicability decisions and any exemptions.

In discussing the overall strengths and weakness of the format of title V permits, DAQ believes that the format of the title V permits creates "user friendliness" for the sources as well as the inspectors, and is a strength of the program. DAQ staff also believes that the process of creating a permit is very time consuming but the end product is very useful in terms of aiding compliance by the source and verifying compliance by the field officer.

## **B. General Permits**

Kentucky issues general permits for natural gas transmission stations (NGTS), landfills, and landfill electricity generators (LEG) and is developing general permits for non-metallic minerals, asphalt plants and ready-mix concrete. At the time of the review DAQ had issued 53 total general permits (35 for NGTSs, 14 for landfills and 4 for LEGs.) DAQ regulations do not allow title V sources to be subject to multiple general permits or a general permit and a standard "site-specific" title V permit at the same time. DAQ requires all general permits to be public noticed in accordance with 40 CFR part 70.7(h). DAQ keeps a list of all the general permits posted on their website for public information. The public may also contact DAQ and request a list of the general permits issued. DAQ bases its five year permit expiration date on the date of permit issuance. DAQ employees believe that the use of general permits is an excellent tool and would like to see it used more often.

### **C. Monitoring**

In order to ensure that its operating permits contain adequate monitoring, DAQ uses "engineering judgement." DAQ provides on the job training to all of their permit writers on monitoring, but they also attend EPA sponsored training, and Air Pollution Training Institute (APTI) telecourses when available. DAQ incorporates compliance assured monitoring (CAM) into its permits.

### **D. Public Participation and Affected State Review**

Kentucky does not have a statewide publication to give general public notice so they use the newspaper with the largest circulation in the immediate area, as determined by the Kentucky press association, for the public notice. Additionally, DAQ also considers their website to be an official method of notification. The cost of publishing these notices in the newspaper has ranged from less than \$100 to \$1000, depending on the newspaper, the area covered and the length of the notice. Most public notice costs fall within a range of \$200 to \$300. To reduce the cost of the public notices, DAQ has chosen to utilize the KY press association. The Kentucky press association handles all aspects of publishing the public notice for DAQ including, determining the appropriate newspaper to publish the notice and negotiating the price of the public notice. Once the notice is published, the KY press association sends a copy of the published notice to DAQ for their files. DAQ also maintains a mailing list to notify any persons interested in title V permits. Anyone interested in being on this mailing list can submit a request to be included by email or mail to DAQ. There is no fee charged for inclusion and new names are listed within the week of the request. Persons on the mailing list receive a copy of any information they request. Most commonly, the information sent to the requestor is the draft permits, SOBs and the summary. These documents are also available to the public during the comment period at the Central office in Frankfort, Kentucky, the regional office, and the public library or County Clerk's office (if the permit is in a county other than the regional office.) In order to help the public determine when the 60 day citizen petition clock begins, DAQ has agreed to include language within all title V public notices referring the public to EPA Region 4's website.

DAQ has not reached out to any specific communities beyond the traditional public notification process and has not conducted any formal citizen training on public participation; however, they provide a link on their website on how to be involved in the public participation process. Other methods utilized by DAQ to provide information to the public on the public participation process include books and pamphlets located in their Frankfort office and an Environmental Education Specialist assigned to the Director's office dedicated to working with the public.

Upon request, copies of any additional information relative to the permit action are sent at no charge via email. However, if the information is requested as a hard copy, the person is charged 10 cents a sheet for the entirety of the information requested. Persons requesting to see additional information relative to a permitting action such as the application, deviation reports, compliance certifications, etc. during the public comment period must submit a Freedom of Information Act request and DAQ will respond within three days as required by the "Kentucky Open Record statute." DAQ believes that the most effective avenue for public notice has been the use of newspaper. DAQ has been able to meet all public information requests in a timely

manner. At the time of the evaluation, DAQ had never extended the public comment period due to information requests; however, they have had to extend the public comment period due to an error in the published public notice.

The people/groups most active in providing comments to DAQ include attorney Robert Ukeiley, John Blair of Valley Watch, Tom Fitzgerald with the Kentucky Resource Council, Sierra Club, National Resource Defense Council and Kentucky Heartwood. DAQ only requires a request via email to schedule a public hearing on a permit and has scheduled public hearings on their own, in anticipation of public interest. DAQ does not provide notices in any language other than English.

Approximately 50 percent of all title V permits receive public comments with the majority of the comments received coming from the source. Of the permits that receive comments, the majority are revised in some way as a result of these comments. Over the years, DAQ has noticed a decrease in the number of comments received. DAQ does not believe there is a trend in the types of comments they receive other than the majority of them do not relate to the terms and conditions in the permit open for comment. The majority of PSD sources receive comments, as well as major sources with toxic emissions, landfills, rock quarries, and sources that have noticeable emissions (*e.g.* smoke stacks). DAQ is required to re-propose any permit revision involving significant relaxations of a monitoring, recordkeeping, and/or reporting requirement, addition or deletion of an applicable regulation, or relaxation of a standard.

DAQ notifies all affected states of every public notice by email. There are no tribes close enough to DAQ to qualify as affected. DAQ has received comments from an affected state on one permit.

#### **E. Permit Issuance/ Revision/ Renewal**

At the time of the program evaluation, DAQ had issued 84 percent of their initial title V permits. This reflects a serious programmatic failure to meet the federal deadline of having all initial title V permits issued by November 14, 1998. During the 2003 fiscal year, EPA sent a letter to DAQ requesting an update on the status of their initial issuance of title V permits and if they could not meet the December deadline, to include a timeline indicating when they would issue their final permits. Kentucky responded with a letter from John Lyons to Beverly Banister of EPA dated January 8, 2003, committing that all initial title V permits would be issued by March 31, 2004. DAQ has submitted to EPA a revised timeline indicating all remaining initial applications will be issued as a draft permit by the end of the 2005 calendar year.

DAQ averages approximately 100 revisions annually to title V permits with 50 percent classified as significant modifications and 50 percent classified as minor modifications. DAQ processes very few revisions as administrative revisions. DAQ averages 120 days to process significant permit revisions and seven days to process administrative revisions; however, on occasion they have exceeded the part 70 timeframes allotted for processing these revisions. DAQ does not typically process minor modifications separately. Their process is to respond to the minor modification request with a letter acknowledging receipt and then approving the request with the next significant modification they receive from the source. This practice is in conflict with the



requirements of 40 CFR part 40 CFR part 70.7(e)(4)(iv) which establishes that a permitting authority may take no longer than 90 days from receipt of application or 15 days after EPA's 45 day review period to complete a minor modification. DAQ needs to develop another method of processing minor modifications that is consistent with 40 CFR part 70.7(e)(4)(iv).

DAQ is working to streamline permit revisions by including guidance as a part of all new permit writers training on evaluating whether a proposed revision qualifies as an administrative amendment, significant or minor revision or if it requires the permit to be reopened. DAQ tracks permit revisions as they are processed through their automated activity tracking database (TEMPO).

At the time of the program evaluation, DAQ had received 93 title V renewal applications and has found the vast majority of them to be timely. DAQ has issued 12 renewal title V permits and has found the renewal process to be easier than the initial round of applications. However, DAQ has been unable to meet the 40 CFR part 70 timeframe of 18 months to process these applications and has developed a plan to reduce the delay in processing these renewal applications. DAQ has committed to a plan of outsourcing the preparation of draft renewal permits to two consulting firms (Kenvirons, and Enviroplan Consulting) on one year contracts to ensure that the applications are processed in a timely fashion.

With respect to permit issuance, EPA has significant concerns related to DAQ's protocol of proposing permits and permit revisions to EPA as "final" (i.e., the permits and permit revisions already have issuance dates when proposed to EPA). An example of this is the relatively recent permitting action involving American Fuji Seal, Inc. Because EPA did not raise any objectionable issues, the final permit (V-05-007) shows an issuance date of June 1, 2005; however, EPA records show that the permit was not even proposed to EPA until June 6, 2005. This action equates to "default issuance" because the permit was basically issued prior to EPA's 45-day review period and, thus, it is in direct conflict with part 70 [see 40 CFR 70.8(e)]. Even more significant is the fact that Kentucky regulations 401 KAR 52:020, Section 25, and 52:100, Section 10(5)(b), respectively, appear to be in direct conflict with 70.8(e). These regulations state that draft permits and permit revisions become "final" at the conclusion of EPA's 45-day review period, giving the impression that neither the public's nor EPA's comments will be taken into account. It is EPA's understanding that DAQ essentially establishes a "pre-EPA review" issuance date for the purposes of construction and then follows up approximately 45 days later with a letter informing the permittee that the respective proposed permit may now be considered "final" for the purposes of operation. This being the case, EPA suggests, as a possible remedy, that DAQ send (along with the notification letter) an updated cover page of the permit (showing the respective effective dates for construction and operation) with instructions that it be substituted in place of the existing one. EPA will work with DAQ to make any needed changes to the title V program.

## **F. Compliance**

401 Kentucky Air Regulation (KAR) 50:055 requires that a facility notify the DAQ of potential excess emissions three days prior to planned startups or shutdowns. Facilities are to report

excess emissions from unplanned startups or shutdowns by telephone "as promptly as possible," and provide written reports upon request from DAQ. Most large facilities provide written follow-up reports. To provide sources with an additional method of notification, DAQ has indicated they would update their website to allow facilities to provide notification of potential deviations via email by October 2005.

Kentucky Regulatory Statute (KRS) 224.01-400 requires the immediate reporting of potential or actual releases of hazardous materials that have a known reportable quantity or may be released in significant quantity as to represent and imminent or substantial risk to public health & welfare. Such releases are to be immediately reported to the Cabinet's 24-hour number.

While the DAQ does not always require a follow-up written report, if they believe that the initial reported information is incomplete, they will ask or require the facility to submit additional written data. DAQ regulation does not contain a specific timeframe to submit additional data, but typically a facility is given two to three weeks to submit the requested information. DAQ does not require deviation reports to be certified by a responsible official. The deviation reports are usually submitted in letter form and signed by a company representative. DAQ defines a deviation as a violation of a permit condition or regulatory standard. Each deviation report must contain the probable cause of the deviation, corrective actions taken, and the magnitude and duration of the deviation. Following the receipt of a deviation report, DAQ reviews the report and evaluates a course of action on a case-by-case basis. DAQ reviews 100 percent of all deviation reports, semi-annual monitoring reports, and annual compliance certifications. Upon receipt of a semi-annual monitoring report or an annual compliance certification, DAQ reviews the report and determines if enforcement action for the identified violations should be pursued.

#### **G. Resources and Internal Management Support**

DAQ establishes its title V fee based on emission volume. Their title V fee for 2004 was \$34.86 per ton. Title V revenue is tracked by receipt in an automated database and expenses are tracked by notations on timesheets. Funds are received and deposited into separate accounts and funds are withdrawn based on necessary expenditures. DAQ's accounting procedures allow for the individual tracking of both title V and non-title V expenses. The process is accomplished by coding of activities on individual employee timesheets and by utilizing different funding codes to differentiate between title V and non-title V activities. DAQ title V staff is not dedicated 100 percent to issuing title V permits. They are also required to write construction permits, which generally have a higher DAQ priority for processing than title V permits. However, with the level of staff vacancies, DAQ is well behind the federal timeframe for issuing their initial title V permits. To track the progress in reducing this backlog of initial title V permits, the title V manager has created an electronic log of all the original title V sources, updates it periodically and routes it to higher management. Based on these timesheets, permit writers devote 75 percent of their time to title V work and 25 percent to non-title V work.

DAQ has authorization to employ 36 permit writers. At the time of the evaluation, DAQ had 28 permit writers, (nine with less than one year experience, and 15 with less than three years experience) and eight vacancies for a vacancy rate of 22 percent. The average permit writing

experience of the permit writers is between two and three years. A turnover rate of over 47 percent in the last year and over 63 percent in the last three years is relatively high compared to other Region 4 state agencies. This lack of permitting experience appears to play a significant role in DAQ's difficulty in processing the initial title V applications within the federal timeframe. One factor that may play a role in employee turnover is DAQ has a starting salary of less than \$27,000 annually for a degreed engineer, which is the lowest starting salary of any title V permitting agency in Region 4. DAQ has developed three-step career ladders for engineers with and without a professional engineer (P.E) certification which helps reduce the initial salary disparity between DAQ permit engineers and engineers employed at other state and local title V programs.

- As of August, 4, 2005, DAQ has 20 of 36 (39 percent vacancy) permit writer positions filled and another permit writer is expected to be absent for an undetermined period of time.

DAQ does not have an Environmental Justice (EJ) policy and has had only limited training on EJ issues.

#### **H. Title V Benefits**

DAQ believes that they have gained significant benefits as a result of the title V program. Since they began to implement the title V program, the title V staff has gained a better understanding of the stationary source requirements in the State Implementation Plan and a better understanding of how to write enforceable permit terms. Other benefits of the title V program and the title V fee revenue include a better stationary source emission inventory and a stable funding source despite fluctuations in other state programs. Additionally, DAQ believes one of the major benefits of the title V program is having all source requirements in a single document which makes it very user friendly for the facility and the inspection officer.

## **2. Permit Reviews**

#### **A. On-site File Reviews**

EPA focused its reviews on permit files that previously received comments from EPA, synthetic-minor permitting actions, renewals (particularly applications), and sources subject to CAM. EPA reviewed the files of six permits.

The primary reasons for targeting permit files that previously received EPA comments were not only to ensure that the permitting authority adequately addressed EPA's comments, but also that the respective files were complete, particularly with respect to the correspondence history between EPA and the permitting authority. Of the files reviewed, most were complete. In one instance where a copy of a particular EPA comment letter was not present, the SOB restated and addressed the issues raised.

Reviews of the files of synthetic-minor permitting actions raised significant concerns. One source appeared to have improperly avoided PSD, because it was never subject to federally enforceable PSD avoidance limits. The files revealed the permitting authority's awareness of this issue as well as its efforts to rectify the situation through appropriate permitting actions. However, the avoidance limits have not yet been made federally enforceable nor has the source gone through PSD review.

- DAQ has identified the source and made the necessary changes identified by EPA and incorporated them into the draft permit (F-05-022), which was public noticed and sent to EPA on August 10, 2005.

Another source appeared to have an issue related to practical enforceability because the required monitoring (as recordkeeping) had no direct correlation to the equations established for major source avoidance and thus, compliance cannot be readily demonstrated. Although quite significant, there was no pattern noticed that would lead EPA to conclude that these instances are part of a systemic problem.

- DAQ has identified the source and changed the compliance demonstration method in the final permit to an equation based on natural gas usage, per EPA's comment.

Reviews of renewal applications also raised significant concerns. It appears that DAQ has been improperly using an abbreviated form for renewal applications (to report only changes). Section 4(2)(c) of 401 KAR 52:020 states that permit renewal applications "...shall provide only the information that is new or different from the most recent source-wide permit application and certification by a responsible official pursuant to Section 23 of this administrative regulation." (emphasis added) However, 40 CFR 70.7(c)(1)(i) states that "[p]ermits being renewed are subject to the same procedural requirements...that apply to initial permit issuance[.]" EPA interprets this particular subpart to mean that renewal applications, like initial applications, must address the entire facility (not only the subsequent changes) and that the Responsible Official must certify to the truth and accuracy of such applications with respect to the entire facility (again, not only the subsequent changes).

Based on the language of Sections 4(2)(c) and 23(1) of 401 KAR 52:020 (and the respective application forms), EPA believes the intent of the Kentucky regulations is to only address any changes made since the original application was submitted and that certification of truth and accuracy is limited only to such changes. If DAQ disagrees with this assessment, it should submit (in writing to EPA) its interpretation of the regulations.

Nonetheless, at a minimum, EPA will accept an abbreviated form that not only lists the changes made to the facility since the original application, but also references the original application and certifies to its truth and accuracy.

Unfortunately, due to time constraints, EPA was unable to review the files for Kentucky's first CAM-subject source. EPA has decided to target the permit for agency review once it is proposed.

## B. Other Reviews

EPA would like to note the instances where DAQ has failed to resolve EPA objection issues. Particularly in the cases of Louisville Gas & Electric's (LG&E) Muldraugh Station and, more recently, Tennessee Valley Authority's (TVA) Plant Paradise, DAQ failed to resolve EPA objections within 90 days pursuant to 40 CFR 70.8(c)(4). 40 CFR 70.8(c)(4) states "[i]f the permitting authority fails, within 90 days after the date of an objection...to revise and submit a proposed permit in response to the objection, the Administrator will issue or deny the permit in accordance with the requirements of the Federal program promulgated under title V of this Act."

In the case of LG&E, EPA had to invoke part 71 and assume the responsibility of issuing the final title V federal operating permit in accordance with 70.8(c)(4). At the time of finalizing this report, the issues surrounding TVA had yet to be resolved. Although these two instances represent a small percentage of total permits issued by DAQ, they are the only instances in Region 4 where a state has not resolved EPA's objection issues, thus the cause for EPA's concern.

## Suggested Improvements

- Section 503(c) of the Clean Air Act established a three year timeframe, beginning upon program approval, for a title V program to approve all of its initial issuance title V applications. Kentucky DAQ received full approval of its title V program on November 14, 1995, and was required to have its full complement of initial applications approved by November 14, 1998. DAQ had 43 initial title V sources still awaiting their initial title V permits. DAQ has submitted, to EPA, a timeline detailing when the final 43 initial title V applications will be released as draft permits for public notice and when DAQ anticipates issuing the final permits. EPA realizes that the submitted timeline may vary due to the potential of issues arising during the process but believes it is important to have established written timeframes for completing these permits.
- DAQ's process of responding to a minor modification request with a letter acknowledging receipt and then approving the request with the next significant modification they receive from the source is in conflict with the requirements of 40 CFR part 70.7(e)(4)(iv) which establishes that a permitting authority may take no longer than 90 days from receipt of application or 15 days after EPA's 45 day review period to complete a minor modification. DAQ needs to develop another method of processing minor modifications that is consistent with 40 CFR part 70.7(e)(4)(iv).
- DAQ has been improperly using an abbreviated form for renewal applications (to report only changes). 40 CFR 70.7(c)(1)(i) states that "[p]ermits being renewed are subject to the same procedural requirements...that apply to initial permit issuance[.]" EPA interprets this particular subpart to mean that renewal applications, like initial applications, must address the entire facility (not only the subsequent changes) and that the Responsible Official must certify to the truth and accuracy of such applications with respect to the entire facility (again, not only the subsequent changes). As a minimum,

EPA will accept an abbreviated form that not only lists the changes made to the facility since the original application, but also references the original application and certifies to its truth and accuracy.

- EPA also has concerns about DAQ's failure to resolve EPA objections within 90 days pursuant to 40 CFR 70.8(c)(4). 40 CFR 70.8(c)(4) states "[i]f the permitting authority fails, within 90 days after the date of an objection...to revise and submit a proposed permit in response to the objection, the Administrator will issue or deny the permit in accordance with the requirements of the Federal program promulgated under title V of this Act."
- As of August 4, 2005, DAQ has a staff vacancy rate of 39 percent of their permit engineers and has experienced a staff turnover rate of over 47 percent, in the past one+ year, within the title V permit engineers section. 40 CFR part 70.4(b)(8) requires all title V agencies to provide adequate staff to "develop, administer and enforce the program." EPA recommends that DAQ develop and submit a plan to ensure that they have adequate trained staff at all times.

## **Kentucky New Source Review (NSR) Program Review**

On March 14, 2005, the Region 4 office of the EPA conducted a review of the Kentucky DAQ NSR permit program. The NSR program review consisted of administering a questionnaire developed for EPA's national NSR program review project. Since Region 4 has reviewed virtually all of DAQ's major NSR permits in recent years, no major NSR permits were evaluated as part of the on-site review. Region 4 reviewed numerous minor NSR permits when it conducted a review of DAQ's minor NSR program in 2000.

The primary EPA staff person conducting the review was Jim Little from Region 4's Air Permits Section. DAQ's primary participant was Don Newell, Manager of DAQ's Permit Review Branch.

DAQ has a SIP-approved NSR program with its own NSR rules. DAQ therefore has authority to issue both major and minor NSR permits. Because there have been ozone nonattainment areas and a sulfur dioxide nonattainment area in Kentucky in recent years, the applicable major NSR permitting regulations are the regulations for prevention of significant deterioration (PSD) and the regulations for nonattainment areas. However, as discussed below, DAQ has not had to process any major nonattainment NSR permits in many years.

DAQ's organizational structure for air permitting resides in the central office in Frankfort with all major and minor NSR permits processed in the Frankfort office. DAQ's NSR permitting jurisdiction covers all of Kentucky except for Jefferson County (Louisville) which has its own SIP-approved permitting program.

DAQ has a merged program for NSR and title V permits. The merged permitting program does not change the NSR requirements applicable to a project.

In July 2004, DAQ implemented EPA's December 2002 NSR rule revisions. However, the NSR program review covered only DAQ's administration of NSR rules in effect prior to the July 2004 implementation of NSR rule revisions.

As an appreciated aid to EPA, DAQ provided a copy of the program review questionnaire annotated with DAQ's answers. For many questionnaire items, the answers provided by DAQ are more detailed than indicated in the summary discussion below. The answered questionnaire from DAQ will be on file at EPA Region 4 for reference if needed.

The headings in the following report duplicate the headings in the NSR program review questionnaire administered during the visit.

## **Common Program Requirements (PSD and Nonattainment NSR)**

### **A. Netting**

DAQ follows netting procedures that are consistent with EPA policy and guidance. The permitting history of a facility is considered when evaluating netting assessments. Regarding emissions decreases from an emissions unit shutdown, DAQ's regulations specify that a cessation of operation of two years or more is presumed to be permanent and therefore enforceable.

### **B. Routine Maintenance, Repair and Replacement (RMRR)**

DAQ is familiar with the RMRR evaluation approach but has not had to make a formal RMRR determination in the last five years.

### **C. Synthetic Minor Limits**

Major and minor source permits are accessible on DAQ's Internet site. This is a useful capability that promotes public knowledge of the permitting system and provides timely information for permit applicants. DAQ does not maintain a specific listing of synthetic minor NSR sources. When resources permit, DAQ might give consideration to creation of such a list.

Notification is required if emissions from a synthetic minor source exceed permit limits. Permit limits are typically set at no higher than 90 percent of the major source thresholds. When a permit with a high limit comes up for renewal, DAQ may ask the source owner to decrease the limit or accept a greater reporting frequency requirement.

Modeling is not required for every synthetic minor permit. DAQ might require modeling if PSD increment consumption is considered to be an issue in the area where a source is located.

### **D. Pollution Control Projects (PCP) Exclusion**

Generally the PCP exclusion is only requested by a source owner when addition of controls will result in collateral emissions increases. The most common examples have been electric utilities that install controls to generate greater allowances or to meet acid rain requirements. [Note: EPA will provide guidance to DAQ and other reviewing authorities on the impact of the June 2005 opinion from the U.S. Court of Appeals for the District of Columbia Circuit concerning pollution control project exclusions.]

### **E. Fugitive Emissions**

DAQ's definition corresponds to the federal rule definition of fugitive emissions. Fugitive emissions are considered in NSR applicability assessments for both new sources and modifications of existing sources, but only if the source is in one of the listed source categories.



Reductions in fugitive emissions might be allowable for netting purposes, but DAQ could not cite any examples of such use.

### **F. Modeling**

DAQ follows the modeling procedures in 40 CFR Part 51, Appendix W. The need for modeling of minor sources is determined on a case-by-case basis. Minor sources typically are modeled only when the modeling analysis for a major source indicates a minor source is contributing to an increment violation.

DAQ requests applicants to submit a modeling protocol for PSD permit applications. Copies of protocols are sent to interested parties, including EPA and Class I area federal land managers, but protocols are not required by rule.

Emission source inventories for modeling are developed by permit applicants and reviewed by DAQ. Sources eliminated from modeling must be identified and justified by applicants. Allowable emission rates are generally used to model compliance with both national ambient air quality standards (NAAQS) and PSD increments. DAQ re-runs the applicants modeling evaluations if considered necessary.

DAQ may evaluate emissions of toxic air pollutants through modeling, but this is not currently a regulatory requirement. A specific toxics regulation is under development.

Background concentrations for modeling purposes usually are obtained from DAQ-operated monitors located near urban areas or large industrial sources, thereby providing a conservative estimate of background air quality levels.

### **G. Stationary Source Determinations**

Single source determinations involving common control have been complicated by a Kentucky court decision concerning Gallatin Steel and Harsco. (Harsco operates a facility on the Gallatin Steel site and processes slag from Gallatin Steel's melting furnace. The court ruled that Gallatin Steel and Harsco are separate sources.) DAQ's current procedure for the common ownership and common control criterion for single source determinations is to take a narrow view of common ownership. For example, in a recent instance two facilities were not considered under common control even though personnel employed by one facility owner also provided services to the other facility and considerable operational interdependence existed between the two facilities. In such instances, DAQ would typically sum the emissions from both facilities to obtain a total emissions estimate for NSR or title V applicability even though the facilities were viewed as separate sources.

Regarding the same industrial grouping single source criterion, DAQ's procedure is that two (or more) facilities must have the same first two digits of the SIC code to be considered in the same industrial grouping. DAQ does not use the "support facility" concept for same industrial grouping classification. On the other hand, DAQ has the final word on which SIC code applies

to a given facility. (DAQ's view on the same industrial grouping criterion is based in part on the Gallatin Steel/Harsco court case.)

DAQ applies the following procedure when evaluating the separation distance criterion for single source determinations. Facilities separated by a distance of no more than 5 miles would generally be considered "adjacent." Facilities separated by a distance of 5 to 20 miles would be assessed on a case-by-case basis. Facilities separated by a distance greater than 20 miles would not be considered adjacent and therefore not part of the same source.

#### **H. Debottlenecking and Increased Utilization**

Federal guidance on emissions increases from debottlenecked units (resulting from a modification of an upstream or downstream unit) is based on the difference between past actual emissions and future allowable emissions regardless of whether allowable emissions are likely to be realized in practice. DAQ departs from this policy by taking what it considers to be a more practical view. Emissions increases from debottlenecked units are based on the difference between past actual emissions and emissions resulting from operation of the debottlenecked unit at the maximum rate to support the new capacity of the modified upstream or downstream unit.

In practice, DAQ encounters debottlenecking situations no more than a few times per year.

#### **I. Relaxation of Limits Taken to Avoid Major NSR**

DAQ's rules on relaxation follow federal rules.

#### **J. Circumvention/Aggregation Issues**

Factors that DAQ uses to check for possible circumvention include the following: proximity in time, project development overlap, stated business plans, and prior accommodation for new projects.

### **Prevention of Significant Deterioration (PSD)**

#### **A. Program Benefits Quantification**

DAQ believes that the PSD program is an incentive for sources to reduce emissions below the major source levels and that the PSD program has contributed to sustaining good air quality.

#### **B. Best Available Control Technology (BACT)**

DAQ expects PSD permit applicants to have primary responsibility for obtaining and documenting relevant BACT-related information from sources other than the RACT/BACT/LAER Clearinghouse. DAQ's limited resources do not allow the agency to perform detailed data searches of this type.

For BACT cost evaluation purposes, DAQ places greatest reliance on total costs and not incremental costs.

### **C. Class I Area Protection for PSD Sources**

DAQ sends a copy of permit applications to appropriate federal land managers for all projects located within 300 km of a Class I area. Assessing impacts on Class I areas has been an important part of some of the larger projects in Kentucky, and DAQ is well versed in the types of Class I area concerns that can arise.

### **D. Additional Impacts - Soils, Vegetation, Visibility, Growth**

DAQ generally assumes that compliance with the primary and secondary national ambient air quality standards is adequate for vegetation protection.

### **E. Preconstruction Monitoring**

DAQ generally allows use of available data from the DAQ ambient monitoring network in lieu of site-specific preconstruction monitoring. However, preconstruction monitoring for ozone and particulate matter (PM<sub>10</sub>) was required for at least two coal-fired power plant projects.

### **F. Increment Tracking Procedures**

Baseline dates are established for specific counties. DAQ's computerized emissions inventory database can provide information for increment tracking, but the database does not have a specific feature for this purpose. Allowable emissions are specified for increment consumption modeling. Increment consumption is assessed when occasioned by a new permit application.

### **G. Endangered Species Act (ESA)**

DAQ has a SIP-approved NSR permitting program. ESA requirements are not applicable.

### **Nonattainment NSR**

Although major source nonattainment area NSR (NNSR) permitting requirements are applicable in a few areas of Kentucky, DAQ has not had to process an NNSR permit in many years. By necessity, therefore, answers to questions about NNSR permitting were hypothetical in nature. With the recent designations of 8-hour ozone nonattainment areas and PM<sub>2.5</sub> nonattainment areas in Kentucky, proficiency in NNSR permitting may become more important. For example, consistent procedures for conducting an NNSR alternatives analysis will be needed.

### **A. Program Benefits**

DAQ believes that the NNSR program provides an incentive to reduce emissions.

## **B. NSR Offsets**

DAQ does not have an emissions offset bank and would have to approve proposed offsets on a case-by-case basis. Currently, DAQ does not allow interpollutant trading for offset purposes.

## **C. LAER Determinations**

Since DAQ has not had to issue a major NNSR permit in many years, the agency does not have recent experience in LAER determination procedures. EPA and DAQ representatives discussed LAER assessment procedures in general, and DAQ was knowledgeable about the procedures that would be appropriate for a LAER determination.

## **D. Alternatives Analysis**

DAQ rules for NNSR include an alternatives analysis requirement as specified by section 173(a)(5) of the Clean Air Act.

## **E. Compliance of Other Major Sources in the State**

Since DAQ has not had to issue a major NNSR permit in many years, the agency has not had to invoke the requirement for an applicant to certify compliance for other major sources owned by the applicant in the same state.

## **Minor NSR Programs**

### **A. NAAQS/Increment Protection**

If required after the minor source PSD baseline date has been established, permit applicants are responsible for minor source modeling. DAQ reviews any modeling performed by applicants and assesses whether an appropriate inventory was used.

### **B. Control Requirements**

DAQ does not have specific emissions control requirements for minor sources or minor modifications.

### **C. Tracking Synthetic Minor NSR Permits**

DAQ's electronic emissions inventory database allows identification of synthetic minor permits.

## **Public Participation**

### **A. Public Notification**

DAQ provides public notice for major NSR permits as required by regulation. The types of projects that receive notification include new major NSR projects, major modifications, synthetic minor permits, and significant revisions that involve netting. Notifications are made by newspaper, through a mailing list, and through a website. Affected adjacent states are on DAQ's mailing list and receive notification of projects in writing.

The initial public comment period can be extended upon request and has been done so.

All public comments received are reviewed. Up to 80 percent of draft permits receiving substantial comments are revised.

A public hearing will be held on a draft permit if requested. Notification of a public hearing is published in a newspaper at least 30 days in advance of the hearing.

### **B. Environmental Justice (EJ)**

EJ considerations for Kentucky projects are discussed in the title V program review section elsewhere in this report.

## **Program Staffing and Training Issues**

As of the time of the review, DAQ had 44 staff members (not including administrative staff) who spend at least part of their time in the NSR program. The permitting technical staff consisted of the branch manager, two engineering "consultants," five section chiefs, and 36 permit reviewers.

DAQ recognizes the importance of NSR training but does not always have the financial resources or schedule latitude to provide formal training for employees on a recurring basis. DAQ believes that changes in the air permitting arena have created a problem for their experienced personnel to maintain up-to-date training; coupling that with the high vacancy rate and continuous turnover experienced by DAQ makes it almost impossible for DAQ to send people to all the training that is needed, while still maintaining the necessary work output. DAQ does not have a formal in-house training program and is receptive to anything EPA can do to assist in making training convenient and minimizing personnel time out of the office. EPA has committed to looking for training opportunities that might be of benefit to DAQ staff.

## **General NSR Program Issues**

DAQ evaluates use of emission factors (including AP-42 factors) based in part on the age of the factor and how close emissions are to an applicability threshold.

During the preceding year, DAQ issued four permits subject to PSD requirements and 96 non-major permits. No nonattainment NSR permits were issued.

DAQ estimates that the average time to issue a PSD permit (from the time an application is deemed complete) is six months or more, depending on the complexity of the project. Several recent large projects (such as coal-fired power plant projects) have been subject to multiple permit amendments and other delays.

In recent permits, DAQ has required consideration of condensible particulate matter for NSR applicability assessments and for particulate matter compliance testing.

### **Effective Construction Permits**

Based on EPA Region 4's experience in reviewing DAQ's merged PSD/title V permits, DAQ creates effective permits for construction approval purposes with appropriate permit conditions.

DAQ has a rule (401 KAR 50.055) allowing exemptions from emissions limits during startups and shutdowns. DAQ noted that some permits may have a specific provision stating that the startup/shutdown exemption provision does not apply.

### **Other Comments**

DAQ does not currently provide workshops or other methods of recurring outreach to provide NSR updates to regulated sources. EPA understands the financial limitations that would prevent expensive and frequent outreach programs, but suggested the possibility of conducting one-day, low cost regulatory update workshops in Frankfort (or some other convenient location) when warranted by regulatory changes such as the recent NSR rule revisions.

EPA noted its concern (not specific to Kentucky) that some title V permittees may attempt to use the 502(b)(10) provision either advertently or inadvertently as a means of avoiding an NSR applicability assessment. DAQ appears to exercise care when reviewing proposed 502(b)(10) changes to insure the provision is not misused from an NSR standpoint.

### **Conclusion**

At the conclusion of the onsite portion of the Title V and NSR program reviews, Region 4 personnel met with key DAQ officials to conduct an exit interview. During this exit interview Region 4 shared the findings of the review and laid out a timeframe for when the final report would be completed. Personnel in attendance from EPA Region 4 were Randy Terry, Katy Forney, Kay Prince, Gregg Worley (by telephone), and Jim Little (by telephone). DAQ officials in attendance were Diana Andrews and Don Newell.

Overall, EPA has some significant concerns about DAQ's title V program and is committed to working with DAQ to ensure that these problems are resolved. Specific areas that concern EPA include: (1) the completion of the remaining initial title V applications; (2) DAQ's use of a title V application short form for renewals; and (3) DAQ's failure to resolve EPA objections within 90 days pursuant to 40 CFR 70.8(c)(4). EPA will lay out in separate correspondence the specific next steps that will be needed to address these significant findings.

